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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,077	05/31/2001	Raman Naduhatty Selai	KUM-104US	9291

7590 01/21/2003

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EXAMINER

NGUYEN, TAM M

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 01/21/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/871,077

Applicant(s)

SELAI ET AL.

Examiner

Tam M. Nguyen

Art Unit

1764

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 1-13.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1764

## **DETAILED ACTION**

### ***Response to Amendment***

The rejection of claims 1-12 under 35 USC § 112 is withdrawn by the examiner in view of the amendment filed on November 18, 2002.

The objection to claims 8-12 is withdrawn by the examiner in view of the amendment filed on November 18, 2002.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

Art Unit: 1764

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henry et al. (3,929,617).

Henry discloses a process for extracting aromatics from a hydrocarbon feedstock, which has a boiling point greater than 650° F (343° C), by contacting the feedstock with solvent(s) such as furfural. Henry also discloses that the solvents are generally used at dosages of about 100 to 300 %. (See col. 2, lines 3-15; col. 6, lines 2-45).

Regarding claim 1, Henry does not specifically disclose that the solvent is a mixture of furfural and an aliphatic amide. However, Henry discloses that the solvent can be a mixture of solvents selected from a list which includes furfural and dimethylformamide. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Henry by using furfural and dimethylformamide because one of skill in the art would pick any combination of solvents in the list including the combination of furfural and dimethylformamide.

Regarding claim 7, Henry does not specifically disclose the ratio of furfural to the amide solvent is in the range of 70:30 to 95:5. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Henry by using the claimed ratio because Henry does not limit the ratio of the solvents. Therefore, one of skill in the art would employ any ratios of the solvents including the claimed ratio and it would be expected that the results would be similar when using the claimed ratio in the process

Art Unit: 1764

of Henry. Consequently, the modified process of Henry is similar to the claimed process.

Hence, it would be expected that the process of Henry would have the claimed stability and would increase in the yield of the raffinate stream as claimed.

### *Response to Arguments*

The argument that Henry does not disclose an increase in the yield of raffinate is noted. However, the argument is not persuasive because of the similarities between the claimed process and the modified process of Henry in terms of feedstock and solvent, it would be expected that the modified process of Henry would result in the increase in the yield of raffinate as claimed.

The argument that Henry discloses a process for solvent extraction of aromatics only from hydrocrackate and not directly from a hydrocarbon oil is noted. However, the argument is not persuasive because as defined in the present specification, (page 5, lines 7-13) the claimed hydrocarbon oil could be a hydrocracked oil. In addition, the hydrocrackate oil of Henry has a boiling point within the boiling point ranges of the presently invention feed.

The argument that Henry does not teach the use of a solvent mixture of furfural and an aliphatic amide is noted. However, the argument is not persuasive because Henry discloses that the solvent can be a mixture of solvents selected from a list which includes furfural and dimethylformamide. Therefore, one of skill in the art would pick any combination of solvents in the list including the combination of furfural and dimethylformamide.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so

Art Unit: 1764

long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The argument that while Henry teaches the use of an anti-solvent (e.g., water) in combination with the solvent, the claimed process does not use an anti-solvent in combination with the solvent is noted. However, the argument is not persuasive because the claimed process does not exclude that the use of an anti-solvent.

The argument that it would not be obvious for a person skilled in the art to arrive at the particular combination of furfural and aliphatic amide in the ratio of 70:30 to 95:5 is noted. However, the argument is not persuasive because the examiner maintains that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Henry by using the claimed ratio because Henry does not limit the ratio of the solvents. Therefore, one of skill in the art would employ any ratios of the solvents including the claimed ratio and it would be expected that the results would be similar when using the claimed ratio in the process of Henry. Applicants have not shown that the claimed ratio cannot be used in the process of Henry.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1764

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (703) 305-7715. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5408 for regular communications and (703) 305-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Tam M. Nguyen  
Examiner  
Art Unit 1764

Tam Nguyen/ TN  
January 15, 2003

  
Walter D. Griffin  
Primary Examiner